

In the claims

Please amend the claims as follows:

1. (currently amended) Apparatus for monitoring the condition of a lead-acid storage battery by assessing its cold-cranking amperage comprising first and second connection conductors each for connection to a respective output terminal of the battery, solid state switching means ~~connected in series with a resistance~~ between the connection conductors and voltage measurement means connected in parallel with ~~the a~~ resistance, in which the switching means operates to complete the circuit to allow current to flow between the battery terminals; characterized in that the switching means is connected in series with a resistance of order 10^{-3} ohms and operates to complete the circuit periodically; the and voltage measurement means ~~being operative~~ operates to measure the potential across the resistance during ~~such~~ current flow and thereby determine the current flowing through the resistance using Ohm's law; the period during which the switching means is closed is of the order of 10^{-5} seconds; wherein and the frequency of such closures being such that the power dissipated by the apparatus averaged over several closures being substantially less than the instantaneous power delivered by the battery and in which the current drawn during each closure is of the same order as the short-circuit current of the battery; whereby the instantaneous current determined as flowing through the resistance is indicative of the cold-cranking amperage of the battery.
2. (canceled)
3. (currently amended) Apparatus according to claim 2 1 in which the gate of the solid-state switching device is controlled by an output of a microcontroller.
4. (previously presented) Apparatus according to claim 1 in which the solid-state switching device is a MOSFET.
5. (previously presented) Apparatus according to claim 1 in which the solid-state switching device is a bipolar transistor.
6. (previously presented) Apparatus according to claim 1 that comprises an amplifier to amplify the voltage that appears across the resistance.

7. (previously presented) Apparatus according to claim 1 comprising an analogue-to-digital converter to measure the voltage that appears across the resistance.
8. (canceled)
9. (canceled)
10. (previously presented) Apparatus according to claim 1 further comprising indicating means operative to indicate the state of a battery to which the apparatus is connected.
11. (original) Apparatus according to claim 10 in which the indicating means comprises indicators that can display lights of one of several alternative colours, the particular colour that is being displayed being indicative of the state of the battery.
12. (previously presented) Apparatus according to claim 10 in which the indicating means includes a display device that can display one or more alphanumeric characters or one or more icons, the display being representative of the state of the battery.
13. (previously presented) Apparatus according to claim 1 further comprising interface means operative to communicate the state of the battery to external apparatus.
14. (original) Apparatus according to claim 13 in which the external apparatus is an electronic control bus of a vehicle.
15. (previously presented) Apparatus according to claim 1 including communications means for conveying the state of a battery to a remote location.
16. (original) Apparatus according to claim 15 in which the communication means operates using wireless telecommunication, either as a radio link or cellular telephony.
17. (previously presented) Apparatus according to claim 1 further including means for monitoring the output of a charging device for the battery and for issuing a warning in the event of its whole or partial failure.
18. (original) Apparatus according to claim 17 which monitors the characteristic output of the charger over time and issues a warning in the event that this suggests whole or partial failure of the charging means.

19. (previously presented) Apparatus according to claim 1 being programmed to enter a sleep mode in which testing is suspended in the event that the battery EMF remains substantially constant for a predetermined period.
20. (previously presented) A lead-acid storage battery comprising apparatus for monitoring the condition of a storage battery according to claim 1.
21. (canceled)
22. (canceled)
23. (currently amended) A storage battery according to claim ~~24~~ 20 further comprising ~~characterised in that the electronic circuit further includes a~~ communication means to transmit the processed signal to other display means remotely ~~position~~ positioned from the storage battery.
24. (currently amended) A storage battery according to claim 23 further characterised in that the display means is selected from the group consisting of ~~includes~~ a light emitting diode ~~or and~~ a liquid crystal display device.
25. (currently amended) A storage battery according to claim ~~23~~ 20, further comprising ~~characterised in that the display means is~~ mounted flush with ~~the~~ a cover.
26. (currently amended) A storage battery according to claim ~~24~~ 20 ~~in which further~~ characterised in that the display means includes a segmented display device for exhibiting a measured value.
27. (currently amended) A storage battery according to claim ~~24~~ 20 in which the display device is capable of displaying one or more icons to indicate the state of the battery.
28. (canceled)
29. (currently amended) A storage battery according to claim ~~24~~ 23 ~~being a further characterised~~ in that the storage battery for use in a motor vehicle, and the display means is adapted to indicate the condition of the battery during the engine off and indicate the condition of the charging system of the motor vehicle when the engine is in operation.

30. (currently amended) A storage battery according to claim ~~24~~ 29 in which ~~further characterised in that~~ the electronic circuit is capable of detecting leakage of energy from the battery and indicating the same on the display means while the engine is not running.
31. (canceled)
32. (canceled)
33. (currently amended) A storage battery according to claim ~~32~~ 29 in which the apparatus external to the battery is a control bus of a vehicle.
34. (canceled)
35. (canceled)
36. (canceled)